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June 1981
(12)

(9) METEOROLOGICAL DATA REPORT,

(6) 19304B MLRS
Missile Numbers V01-007, V01-008
Round Numbers V-150/MD-17 V-151/MD-18,
8 June 1981
(11)

by

(12) 23

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM
UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*:

Meteorological data gathered for the launching of the 19304B MLRS, Missile NO. V01-007 and V01-008, Round Numbers V-151/MD-17 and V-151/MD-18 presented in tabular form.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

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CONTENTS

INTRODUCTION

19304B MLRS, Missile Numbers V01-007 and V01-008, Round Numbers V-150/MD-17 and V-151/MD-18, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1430 and 1430:05 MDT, 8 June 1981. The scheduled launch times were 1000:04.5 and 1000:09 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained in the following methods:

1. Observations:

   a. Surface

   (1) Standard surface observations to include pressure, temperature ($^{\circ}$C), relative humidity, dew point ($^{\circ}$C), density (gm/m^3), wind speed and direction, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

   (2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

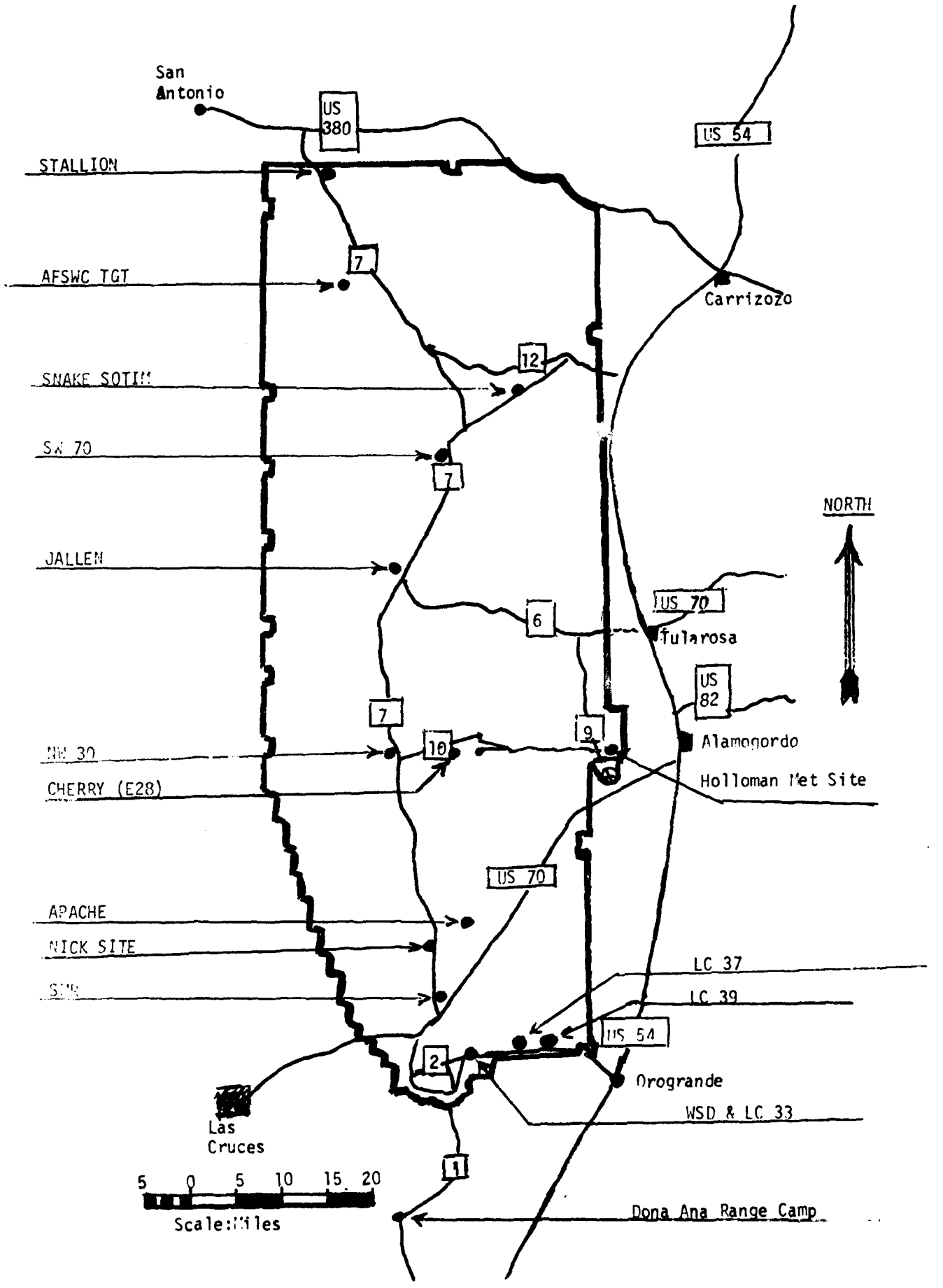
   b. Upper Air:

   (1) Low level wind data were obtained from RAPTS T-9 pibal observations at:

SITE AND ALTITUDE	
LC-33	2 KM
NICK	2 KM

   (2) Air structure data (rawinsonde) were collected at the following Met Sites:

SITE AND TIME	
LC-37	1000 MDT
WSD	1133 MDT
LC-37	1300 MDT
WSD	1330 MDT


San Antonio
US 380
US 54
STALLION
AFSWC TGT
Carrizozo
SNAKE SOTIM
SW 70
JALLEN
NORTH
US 70
Tularosa
US 82
Alamogordo
NM 30
CHERRY (E28)
Holloman Met Site
US 70
APACHE
NICK SITE
LC 37
LC 39
US 54
Orogrande
WSD & LC 33
Las Cruces
5 0 5 10 15 20
Scale: Miles
Dona Ana Range Camp

PROJECT SURFACE OBSERVATION

TABLE 1 STATION LC-33

DATE 8 (DAY) June (MONTH) 1981 (YEAR) X= 484,982.64 Y= 185,957.73 H= 3983.00

TIME MDT	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1430	876.4		40.8		1.1	9	963	330	8		40

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
	1	CU	6500							

PSYCHROMETRIC COMPUTATION

TIME: MDT	1430		
DRY BULB TEMP.	40.8		
WET BULB TEMP.	17.4		
WET BULB DEPR.	~~23.4~~		
DEW POINT	1.1		
RELATIVE HUMID.	9		

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

8 June 1981
1430 MDT

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	273	10	T -30	291	12	T -30	291	10
T-20	285	10	T -20	287	10	T -20	298	11
T-10	291	08	T -10	279	09	T -10	298	10
T0.0	291	09	T 0.0	290	09	T 0.0	297	10
T+10	296	10	T +10	301	10	T +10	303	10

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
[illegible]	282	10	T -30	288	10
[illegible]	297	11	T -20	300	13
[illegible]	293	15	T -10	290	15
[illegible]	330	08	T 0.0	297	15
[illegible]	330	10	T +10	278	14

LEVEL #3, 102 FEET [illegible],982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
[illegible]ME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
[illegible]	273	16	T -30	273	15
[illegible]	275	17	T -20	263	17
[illegible]	282	16	T -10	282	19
[illegible]	282	22	T 0.0	285	18
[illegible]	261	20	T +10	267	20

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 8 June 1981

SITE: LC-33
TIME: 1430 MDT
WSTM COORDINATES:
X= 485,135.76
Y= 185,919.24
H= 3988.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	330	08
150	283	12
210	275	13
270	285	12
330	274	11
390	280	13
500	284	10
650	267	09
800	262	07
950	252	08
1150	265	10
1350	272	14
1550	265	15
1750	267	14
2000	287	14

SITE: NICK
TIME: 1430 MDT
WSTM COORDINATES:
X= 470,734.56
Y= 255,775.64
H= 4126.57

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	287	07
150	293	13
210	304	11
270	297	11
330	278	11
390	269	15
500	276	11
650	265	12
800	258	08
950	253	09
1150	246	13
1350	258	16
1550	261	18
1750	266	16
2000	282	11

Wind data obtained from RAPTS T-9 tracked Pilot-Ballon observation.

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
8 June 1981

LC-37 1000 MDT
METCM1324063
081600124876
00027005 30710876
01025011 30590866
02005014 30350842
03609010 30020805
04555014 29620760
05531015 29220718
06510018 28780677
07484016 28300637

WSD 1133 MDT
METCM1324064
081750122878
00034007 31030878
01061011 30780868
02634007 30500845
03584005 30100807
04553013 29630763
05512019 29190720
06479019 28760678
07429015 28310639
08367010 27860602

LC-37 1300 MDT
METCM1324063
081900124875
00533008 31210875
01506007 31020865
02465014 30620842
03460015 30230805
04464015 29730760

WSD 1330 MDT
METCM1324064
081950122877
00320008 31290877
01449013 31130868
02457015 30770844
03426012 30350807
04441011 29830763
05394005 29320720
06417007 28820679
07446010 28320640
08433014 27850602

STATION ALTITUDE 4051.37 FEET MSL
8 JUNE 81 1000 HRS MDT
ASCENSION NO. 116

SIGNIFICANT LEVEL DATA
1590180116
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
876.1	4051.4	32.9	5.5	18.0
850.0	4940.4	29.9	1.4	16.0
700.0	10495.2	17.0	-6.8	19.0
618.8	13885.8	7.0	-9.8	29.0
592.4	15057.1	3.7	-8.9	39.0

STATION ALTITUDE 4051.37 FEET MSL
8 JUNE 81 1000 HRS MDT
ASCENSION NO. 116

UPPER AIR DATA
1590180116
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	876.1	32.9	5.5	18.0	993.4	682.9	15.0	5.1	1.000258
4500.0	862.8	31.4	3.4	17.0	983.6	681.0	6.5	6.4	1.000251
5000.0	848.2	29.8	1.3	16.0	972.6	679.1	.5	7.9	1.000244
5500.0	833.5	28.6	.6	16.3	959.5	677.7	356.5	9.6	1.000240
6000.0	819.1	27.4	-.1	16.6	946.6	676.4	353.7	11.2	1.000236
6500.0	804.9	26.3	-.8	16.8	933.9	675.0	344.7	10.6	1.000232
7000.0	791.0	25.1	-1.5	17.1	921.4	673.7	333.5	10.0	1.000229
7500.0	777.3	24.0	-2.3	17.4	909.1	672.4	322.9	11.4	1.000225
8000.0	763.8	22.8	-3.0	17.7	896.9	671.0	314.8	13.2	1.000221
8500.0	750.6	21.6	-3.7	17.9	884.9	669.7	310.9	13.7	1.000217
9000.0	737.6	20.5	-4.5	18.2	873.1	668.3	307.4	14.3	1.000214
9500.0	724.8	19.3	-5.2	18.5	861.5	667.0	306.1	14.3	1.000210
10000.0	712.2	18.1	-6.0	18.7	850.0	665.6	304.8	14.4	1.000207
10500.0	699.9	17.0	-6.8	19.0	838.7	664.2	303.1	14.9	1.000203
11000.0	687.3	15.5	-7.0	20.5	827.8	662.6	301.6	15.4	1.000201
11500.0	674.9	14.0	-7.3	22.0	817.0	660.9	293.0	16.5	1.000198
12000.0	662.7	12.6	-7.7	23.4	806.5	659.1	285.2	17.9	1.000196
12500.0	650.8	11.1	-8.2	24.9	796.1	657.4	276.1	19.2	1.000193
13000.0	639.1	9.6	-8.7	26.4	785.9	655.7	268.2	20.8	1.000190
13500.0	627.5	8.1	-9.3	27.9	775.8	654.0	264.1	16.7	1.000187
14000.0	616.2	6.7	-9.7	30.0	765.7	652.3			1.000185
14500.0	604.8	5.3	-9.2	34.2	755.3	650.7			1.000183
15000.0	593.7	3.9	-9.0	38.5	745.1	649.0			1.000181

STATION ALTITUDE 4051.37 FEET MSL
8 JUNE 81 1000 HRS MDT
ASCENSION NO. 116

MANDATORY LEVELS
15901 80116
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 8

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL.HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4937.	29.9	1.4	16.	1.1	7.7
800.0	6696.	25.9	-1.1	17.	340.4	10.3
750.0	8541.	21.6	-3.8	18.	310.6	13.8
700.0	10485.	17.0	-6.8	19.	303.2	14.9
650.0	12534.	11.0	-8.2	25.	275.4	19.3
600.0	14698.	4.7	-9.1	36.		

STATION ALTITUDE 3989.00 FEET [illegible]
8 JUNE 81 1133 HRS MDT
ASCENSION NO. 378

SIGNIFICANT LEVEL DATA
1590020378
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 9

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
878.1	3989.0	36.0	4.3	14.0
872.4	4182.7	33.8	6.2	18.0
850.0	4950.7	31.4	4.2	18.0
783.4	7321.2	24.3	-.1	20.0
700.0	10506.5	16.0	-5.1	23.0
588.4	15244.9	3.4	-10.6	35.0
545.4	17251.1	-1.3	-21.9	19.0
500.0	19511.0	-5.4	-26.5	17.0
400.0	25134.5	-18.0	-36.4	18.0
300.0	31989.1	-34.1	-50.0	18.0

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1133 HRS MDT
ASCENSION NO. 378

UPPER AIR DATA
159002037B
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	878.1	36.0	4.3	14.0	985.9	680.2	20.0	7.0	1.000253
4000.0	877.8	35.9	4.5	14.2	985.9	680.1	19.8	7.0	1.000253
4500.0	863.1	32.8	5.4	18.0	978.8	682.8	11.6	5.9	1.000254
5000.0	848.6	31.3	4.2	18.0	967.6	681.0	.2	5.1	1.000249
5500.0	834.1	29.8	3.3	18.5	955.9	679.2	344.9	4.5	1.000245
6000.0	819.8	28.3	2.4	18.9	944.4	677.5	326.7	4.2	1.000241
6500.0	805.9	26.8	1.5	19.3	933.1	675.7	321.9	5.0	1.000237
7000.0	792.1	25.3	.5	19.7	921.9	674.0	320.4	7.2	1.000232
7500.0	778.5	23.8	-.3	20.2	910.5	672.3	320.3	11.6	1.000228
8000.0	764.8	22.5	-1.1	20.6	898.6	670.8	312.8	13.3	1.000225
8500.0	751.4	21.2	-1.9	21.1	886.9	669.3	301.7	15.7	1.000221
9000.0	738.3	19.9	-2.7	21.6	875.3	667.8	294.3	18.2	1.000217
9500.0	725.3	18.6	-3.5	22.1	863.9	666.3	290.5	19.5	1.000214
10000.0	712.6	17.3	-4.3	22.5	852.7	664.8	286.2	19.9	1.000210
10500.0	700.2	16.0	-5.1	23.0	841.6	663.2	280.8	20.1	1.000206
11000.0	687.5	14.7	-5.5	24.2	830.2	661.7	274.0	19.2	1.000204
11500.0	675.0	13.4	-6.0	25.5	818.9	660.1	267.6	18.4	1.000201
12000.0	662.7	12.0	-6.5	26.8	807.8	658.6	261.4	17.7	1.000198
12500.0	650.7	10.7	-7.0	28.0	796.9	657.0	254.5	16.7	1.000195
13000.0	638.9	9.4	-7.6	29.3	786.2	655.5	246.8	15.9	1.000192
13500.0	627.3	8.0	-8.2	30.6	775.6	653.9	237.5	13.7	1.000189
14000.0	615.9	6.7	-8.9	31.8	765.2	652.4	224.6	11.7	1.000186
14500.0	604.7	5.4	-9.5	33.1	754.9	650.8	206.4	10.3	1.000183
15000.0	593.7	4.1	-10.2	34.4	744.8	649.2	196.7	11.0	1.000180
15500.0	582.7	2.8	-11.9	33.0	734.5	647.7	193.3	12.2	1.000176
16000.0	571.8	1.6	-14.5	29.0	724.0	646.2	193.6	12.9	1.000171
16500.0	561.1	.5	-17.2	25.0	713.7	644.7	194.7	13.6	1.000167
17000.0	550.6	-.7	-20.3	21.0	703.5	643.3	197.1	14.2	1.000163
17500.0	540.2	-1.8	-22.4	18.8	692.9	642.0	200.8	14.5	1.000160
18000.0	529.9	-2.7	-23.4	18.3	682.0	640.9	206.5	14.5	1.000157
18500.0	519.8	-3.6	-24.5	17.9	671.3	639.8	211.7	13.1	1.000154
19000.0	509.9	-4.5	-25.5	17.5	660.8	638.8	218.6	10.2	1.000151
19500.0	500.2	-5.4	-26.5	17.0	650.4	637.7	222.9	8.0	1.000149
20000.0	490.4	-6.5	-27.4	17.1	640.3	636.3	221.2	6.4	1.000146
20500.0	480.8	-7.6	-28.3	17.2	630.4	635.0	210.6	6.6	1.000144
21000.0	471.3	-8.7	-29.1	17.3	620.7	633.6	200.0	7.5	1.000141
21500.0	462.1	-9.9	-30.0	17.4	611.1	632.3	198.9	6.8	1.000139
22000.0	453.0	-11.0	-30.9	17.4	601.7	630.9	199.7	6.3	1.000137
22500.0	444.1	-12.1	-31.8	17.5	592.4	629.6	203.9	6.0	1.000134
23000.0	435.4	-13.2	-32.6	17.6	583.3	628.2	205.5	6.2	1.000132

UPPER AIR DATA
1590020378
WHITE SANDS
TABLE 10 CON'T

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1133 HRS MDT
ASCENSION NO. 378

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	426.8	-14.3	-33.5	17.7	574.3	626.8	204.4	6.3	1.000130
24000.0	416.4	-15.5	-34.4	17.8	565.5	625.5	191.2	5.5	1.000128
24500.0	410.2	-16.6	-35.3	17.9	556.8	624.1	177.5	4.8	1.000126
25000.0	402.1	-17.7	-36.2	18.0	548.3	622.7	163.8	4.3	1.000124
25500.0	393.9	-18.9	-37.2	18.0	539.5	621.3	160.9	4.1	1.000122
26000.0	385.7	-20.0	-38.1	18.0	530.8	619.9	165.2	3.8	1.000120
26500.0	377.7	-21.2	-39.1	18.0	522.2	618.4	155.6	3.6	1.000118
27000.0	369.9	-22.4	-40.1	18.0	513.7	617.0	142.5	3.6	1.000116
27500.0	362.2	-23.6	-41.1	18.0	505.4	615.5	121.0	4.1	1.000114
28000.0	354.7	-24.7	-42.1	18.0	497.3	614.1	105.6	4.9	1.000112
28500.0	347.3	-25.9	-43.1	18.0	489.3	612.6	95.7	6.0	1.000110
29000.0	340.1	-27.1	-44.1	18.0	481.4	611.2	93.3	6.7	1.000108
29500.0	333.0	-28.3	-45.1	18.0	473.7	609.7	95.1	6.9	1.000106
30000.0	326.1	-29.4	-46.1	18.0	466.1	608.2	94.7	6.9	1.000104
30500.0	319.3	-30.6	-47.1	18.0	458.6	606.8			1.000103
31000.0	312.7	-31.8	-48.1	18.0	451.3	605.3			1.000101
31500.0	306.2	-33.0	-49.0	18.0	444.1	603.8			1.000099

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1133 HRS MDT
ASCENSION NO. 378

MANDATORY LEVELS
1590020378
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 11

PRESSURE	GEOPOTENTIAL	TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT		DIRECTION	SPEED
MILLIBARS	FEET	DEGREES	CENTIGRADE	PERCENT	DEGREES(TN)	KNOTS
850.0	4947.	31.4	4.2	18.	1.6	5.1
800.0	6712.	26.1	1.1	19.	320.8	5.3
750.0	8557.	21.1	-2.0	21.	300.4	16.0
700.0	10496.	16.0	-5.1	23.	280.8	20.1
650.0	12541.	10.6	-7.0	28.	253.8	16.6
600.0	14705.	4.8	-9.8	34.	199.5	10.3
550.0	17009.	-.8	-20.4	21.	197.2	14.2
500.0	19483.	-5.4	-26.5	17.	222.9	8.0
450.0	22165.	-11.3	-31.2	17.	201.3	6.2
400.0	25092.	-18.0	-36.4	18.	160.1	4.3
350.0	28319.	-25.5	-42.7	18.	98.1	5.7
300.0	31924.	-34.1	-50.0	18.		

STATION ALTITUDE 4051.37 FEET MS
8 JUNE 81 1300 HRS MDT
ASCENSION NO. 117

SIGNIFICANT LEVEL DATA
1590180117
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 12

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
874.9	4051.4	37.2	4.2	13.0
850.0	4909.9	32.6	3.5	16.0
801.8	6619.1	27.8	.5	17.0
752.8	8433.9	22.5	-3.0	18.0
714.6	9909.2	18.6	-4.8	20.0
700.0	10490.1	18.5	-4.9	20.0
695.6	10667.3	18.0	-5.9	19.0

STATION ALTITUDE 4051.37 FEET MSL
8 JUNE 81 1300 HRS MDT
ASCENSION NO. 117

UPPER AIR DATA
1590180117
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 13

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	874.9	37.2	4.2	13.0	978.6	687.5	300.0	8.0	1.000251
4500.0	861.8	34.8	3.9	14.6	971.4	684.9	280.0	9.1	1.000249
5000.0	847.4	32.3	3.4	16.1	962.9	682.1	264.3	11.3	1.000246
5500.0	833.0	30.9	2.5	16.3	951.2	680.5	257.6	12.4	1.000242
6000.0	818.9	29.5	1.6	16.6	939.5	678.9	257.4	12.0	1.000238
6500.0	805.1	28.1	.7	16.9	928.1	677.2	257.8	12.0	1.000234
7000.0	791.3	26.7	-.2	17.2	916.7	675.6	255.8	14.5	1.000230
7500.0	777.6	25.2	-1.2	17.5	905.4	673.9	258.1	18.2	1.000226
8000.0	764.2	23.8	-2.1	17.8	894.3	672.2	266.1	17.7	1.000222
8500.0	751.0	22.3	-3.0	18.1	883.3	670.5	268.5	24.7	1.000218
9000.0	737.9	21.0	-3.6	18.8	871.8	669.0	267.8	11.9	1.000215
9500.0	725.0	19.7	-4.3	19.4	860.5	667.4	66.6	6.5	1.000211
10000.0	712.3	18.6	-4.8	20.0	848.6	666.2	263.6	18.5	1.000208
10500.0	699.8	18.5	-4.9	19.9	834.0	666.0	272.7	30.5	1.000205

STATION ALTITUDE 4051.37 FEET MSL
8 JUNE 81 1300 HRS MDT
ASCENSION NO. 117

MANDATORY LEVELS
1590180117
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 14

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL.HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4906.	32.6	3.5	16.	266.7	10.8
800.0	6679.	27.6	.4	17.	256.6	12.5
750.0	8532.	22.2	-3.1	18.	268.8	24.5
700.0	10480.	18.5	-4.9	20.	274.4	25.4

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1330 HRS MDT
ASCENSION NO. 379

SIGNIFICANT LEVEL DATA
1590020379
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
877.4	3989.0	39.0	1.9	10.0
850.0	4936.4	33.5	4.2	16.0
700.0	10526.7	16.9	-4.9	22.0
618.0	13951.9	6.7	-6.9	37.0
583.6	15487.6	2.9	-11.0	35.0
575.0	15881.9	1.4	-7.9	50.0
566.2	16289.9	.8	-16.0	27.0
532.4	17903.6	-3.1	-24.6	17.0
500.0	19530.1	-5.6	-27.4	16.0
436.6	22983.4	-12.2	-32.8	16.0
400.0	25163.4	-17.5	-36.6	17.0
385.2	26087.5	-20.3	-38.9	17.0
343.4	28854.1	-26.4	-44.0	17.0
310.8	31198.2	-32.5	-48.7	18.0
300.0	32015.1	-34.8		

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1330 HRS MDT
ASCENSION NO. 379

UPPER AIR DATA
1590020379
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	877.4	39.0	1.9	10.0	976.2	689.3	300.0	8.0	1.000245
4000.0	877.1	38.9	1.9	10.1	976.1	689.3	299.5	8.0	1.000245
4500.0	862.5	36.0	3.5	13.2	968.5	686.2	275.5	8.5	1.000247
5000.0	848.1	33.3	4.2	16.1	960.6	683.3	257.2	10.3	1.000247
5500.0	833.5	31.8	3.4	16.6	948.7	681.6	245.1	12.8	1.000243
6000.0	819.2	30.3	2.7	17.1	937.1	679.8	242.3	13.1	1.000239
6500.0	805.1	28.9	1.9	17.7	925.6	678.1	240.9	13.1	1.000235
7000.0	791.2	27.4	1.1	18.2	914.3	676.4	240.8	13.1	1.000232
7500.0	777.6	25.9	.3	18.8	903.1	674.7	241.7	12.5	1.000228
8000.0	764.2	24.4	-.5	19.3	892.1	673.0	243.6	11.5	1.000224
8500.0	751.0	22.9	-1.3	19.8	881.2	671.3	244.5	9.6	1.000220
9000.0	738.1	21.4	-2.2	20.4	870.6	669.5	245.2	7.4	1.000217
9500.0	725.4	19.9	-3.1	20.9	860.0	667.8	238.8	5.4	1.000213
10000.0	712.9	18.5	-4.0	21.4	849.6	666.1	231.0	4.3	1.000210
10500.0	700.6	17.0	-4.9	22.0	839.4	664.3	232.4	4.7	1.000206
11000.0	688.1	15.5	-4.9	24.1	828.5	662.6	234.8	6.3	1.000204
11500.0	675.7	14.0	-5.0	26.3	817.8	660.9	236.3	7.8	1.000202
12000.0	663.5	12.5	-5.3	28.5	807.2	659.2	237.2	8.9	1.000199
12500.0	651.5	11.0	-5.6	30.6	796.8	657.5	242.7	9.3	1.000196
13000.0	639.8	9.5	-6.0	32.8	786.6	655.8	248.3	9.8	1.000194
13500.0	628.2	8.0	-6.5	35.0	776.5	654.0	250.0	11.2	1.000191
14000.0	616.9	6.6	-7.1	36.9	766.6	652.3	246.4	12.3	1.000188
14500.0	605.5	5.3	-8.4	36.3	755.9	650.8	244.7	13.8	1.000184
15000.0	594.3	4.1	-9.7	35.6	745.3	649.3	245.1	15.5	1.000180
15500.0	583.3	2.9	-10.9	35.5	735.0	647.8	239.8	16.1	1.000177
16000.0	572.4	1.2	-9.8	43.3	725.4	645.9	234.4	16.3	1.000176
16500.0	561.7	.3	-17.1	25.7	714.8	644.6	226.7	15.2	1.000167
17000.0	551.1	-.9	-19.6	22.6	704.6	643.1	218.4	14.4	1.000164
17500.0	540.7	-2.1	-22.3	19.5	694.5	641.6	218.3	15.0	1.000160
18000.0	530.4	-3.2	-24.8	16.9	684.2	640.2	218.3	15.5	1.000157
18500.0	520.3	-4.0	-25.6	16.6	673.1	639.3	214.9	14.6	1.000154
19000.0	510.3	-4.8	-26.5	16.3	662.1	638.4	211.0	13.7	1.000151
19500.0	500.6	-5.6	-27.3	16.0	651.4	637.4	198.9	9.3	1.000149
20000.0	490.9	-6.5	-28.1	16.0	641.0	636.3	183.3	6.2	1.000146
20500.0	481.3	-7.5	-28.9	16.0	630.8	635.2	172.7	4.1	1.000143
21000.0	472.0	-8.4	-29.7	16.0	620.8	634.0	180.0	5.1	1.000141
21500.0	462.8	-9.4	-30.4	16.0	610.9	632.9	184.8	5.4	1.000139
22000.0	453.8	-10.3	-31.2	16.0	601.2	631.7	189.1	5.4	1.000136
22500.0	445.0	-11.3	-32.0	16.0	591.7	630.5	208.2	4.4	1.000134
23000.0	436.3	-12.2	-32.8	16.0	582.4	629.4	232.8	4.4	1.000132

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1330 HRS MDT
ASCENSION NO. 379

UPPER AIR DATA
1590020379
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 16 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	427.6	-13.5	-33.7	16.2	573.5	627.9	245.2	5.9	1.000130
24000.0	419.1	-14.7	-34.5	16.5	564.7	626.4	249.8	7.0	1.000128
24500.0	410.8	-15.9	-35.4	16.7	556.1	624.9	251.5	7.6	1.000126
25000.0	402.6	-17.1	-36.3	16.9	547.7	623.5	254.8	7.3	1.000124
25500.0	394.5	-18.5	-37.4	17.0	539.7	621.7	260.0	6.6	1.000122
26000.0	386.6	-20.0	-38.7	17.0	531.9	619.9	262.4	4.6	1.000120
26500.0	378.7	-21.2	-39.7	17.0	523.5	618.4	264.8	2.2	1.000118
27000.0	370.9	-22.3	-40.6	17.0	515.0	617.1	175.8	.5	1.000116
27500.0	363.3	-23.4	-41.5	17.0	506.6	615.7	108.8	2.2	1.000114
28000.0	355.8	-24.5	-42.4	17.0	498.4	614.3	95.3	3.7	1.000112
28500.0	348.5	-25.6	-43.4	17.0	490.4	613.0	89.3	5.2	1.000110
29000.0	341.3	-26.8	-44.3	17.1	482.5	611.5	85.8	6.9	1.000108
29500.0	334.1	-28.1	-45.3	17.3	474.9	609.9	85.1	8.1	1.000106
30000.0	327.1	-29.4	-46.3	17.5	467.3	608.3	85.3	9.1	1.000105
30500.0	320.2	-30.7	-47.3	17.7	460.0	606.7	85.5	8.9	1.000103
31000.0	313.4	-32.0	-48.3	17.9	452.7	605.0			1.000101
31500.0	306.8	-33.3	-53.3	11.4**	445.6	603.3			1.000100
32000.0	300.2	-34.8	-79.3	.3**	438.7	601.5			1.000098

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
8 JUNE 81 1330 HRS MDT
ASCENSION NO. 379

MANDATORY LEVELS
1590020379
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 17

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL.HUM.	WIND DATA	
		AIR	DEWPOINT		DIRECTION	SPEED
MILLIBARS	FEET	DEGREES CENTIGRADE		PERCENT	DEGREES(TN)	KNOTS
850.0	4933.	33.5	4.2	16.	259.3	10.0
800.0	6710.	28.3	1.6	18.	240.9	13.1
750.0	8569.	22.8	-1.4	20.	244.6	9.3
700.0	10516.	16.9	-4.9	22.	232.5	4.7
650.0	12565.	10.8	-5.6	31.	243.6	9.3
600.0	14729.	4.7	-9.0	36.	245.5	14.7
550.0	17032.	-1.0	-19.9	22.	218.4	14.5
500.0	19502.	-5.6	-27.4	16.	198.2	9.1
450.0	22186.	-10.7	-31.6	16.	195.6	5.0
400.0	25121.	-17.5	-36.6	17.	256.2	7.1
350.0	28348.	-25.4	-43.2	17.	90.4	4.9
300.0	31950.	-34.8				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.